

In the Claims

1. (currently amended) An apparatus for supplying as oxygen therapeutic gas, comprising:
  - a cylinder for containing a pressurized oxygen therapeutic gas;
  - a nasal cannula, adapted to be introduced into a nasal passage of a patient;
  - a conduit extending between the cylinder and the nasal cannula for directing the oxygen therapeutic gas to the nasal cannula from the cylinder;
  - a valve, provided on the conduit, for allowing and blocking the fluid communication between the cylinder and the nasal cannula;
  - a pressure sensor, provided on the conduit downstream of the valve, for detecting the pressure in the conduit;
  - an orifice, provided on the conduit upstream of the valve, for regulating pressure in the conduit upstream of the valve; and
  - a controller for controlling the operation of the valve in synchronization with respiration of a patient based on changes in pressure detected by the pressure sensor, the controller comparing respiratory frequency with a threshold to increase volume of the oxygen therapeutic gas for each respiration in step when the respiratory frequency is larger than the threshold.
2. (cancelled)
3. (original) An apparatus according to claim 1, wherein the valve is a solenoid operated valve having a solenoid, and the controller controls the solenoid to open the valve for a time period sufficient for a volume of the oxygen therapeutic gas to flow therethrough for each respiration.
4. (original) An apparatus according to claim 1, wherein the pressure sensor is an electric capacitor type pressure sensor having a capacitor of which the electrostatic capacitance represents the detected pressure.
5. (original) An apparatus according to claim 1, wherein the controller determines the initiation of each respiration by monitoring the changes in the pressure detected by the pressure sensor.
6. (original) An apparatus according to claim 5, wherein the controller calculates the respiratory frequency by measuring the time interval between the initiations of sequential respirations.